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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,809

02/05/2004

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EXAMINER

LOUIE, WAI SING

ART UNIT

PAPER NUMBER

2814

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/773,809	Applicant(s) FUJITA ET AL.	
	Examiner Wai-Sing Louie	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16,30-38 and 48-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16,30-38 and 48-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6-7, 9, 11, 13, and 50-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi (US 7,265,402).

With regard to claims 1, 6-7, and 11, Koyanagi discloses a solid state image sensor (col. 12, line 38 et seq. and fig. 1) comprising:

- A solid state image sensor device 1 having an effective pixel region 23b in one surface (col. 12, line 39 and fig. 1);
- A light-transparent cover 51 arranged opposite to the efficiency pixel region 23b (col. 3, line 41, col. 14, line 38);
- An adhesive section 46 for adhering the solid state image sensor and the light-transparent cover 51 (col. 15, line 8);
- Connection terminals 16 disposed on the solid state image sensor 1 (col. 15, lines 57-58 and fig. 1), the adhering section 46 disposed at least in a portion of the region where the cover opposes the solid state image sensor 1 and such that the connection terminals 16 are exposed (fig. 1), where a cavity (space) 42 is formed between the effective pixel region 1 and the light-transparent cover 51 (fig. 1);

- Koyanagi does not disclose the light-transparent cover 51 having planar dimensions smaller than those of the solid state image sensor 1. However, it would have been obvious to one of ordinary skill in the art to use any suitable sizes of cover for the device, because it has been held that where the general conditions of the claims are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation. See *In re Alner*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955).

With regard to claims 3, 9, and 13, Koyanagi discloses the adhesive section 46 is formed outside the effective pixel region in the one surface of the solid state image sensor 1 (fig. 1).

With regard to claim 50, Koyanagi discloses the light-transparent cover 51 is planar (fig. 1).

With regard to claim 51, the adhesive section 46 seals the light-transparent cover 51 to the solid state image sensor 1 (fig. 1).

With regard to claim 52-58, in addition to the limitations disclosed in claim 1 above, Koyanagi also discloses:

- The space 42 allows incoming light to pass through the light-transparent cover 51 to be incident light directly on the effective pixel region 23b (fig. 1).

Claims 2, 4-5, 8, 10, 14-16, 30-38, and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi (US 7,265,402) in view of Hashimoto (US Pub. 2003/0123779).

With regard to claims 2, 8, 10, 49, Koyanagi does not disclose the adhesive 46 is a photosensitive adhesive. However, Hashimoto discloses a thermal photosensitive adhesive 36 used in the optical device (¶ [0089]). Hashimoto teaches the photosensitive adhesive is easy handling and can be temporary cured (Hashimoto ¶ [0089]). Therefore, it would have been obvious to one of ordinary skill in the art to modify Koyanagi's device with the teaching of Hashimoto to use photosensitive adhesive in order to have an easy handling adhesive.

With regard to claim 4-5, 14-15, Koyanagi modified by Hashimoto disclose the adhesive section 36 seals the outer periphery of the space (Hashimoto fig. 8).

With regard to claims 16, 31, in addition to the limitations disclosed in claims 1-2 above, Koyanagi also discloses:

- Koyanagi modified by Hashimoto disclose a lens and a lens retainer for retaining the lens (Hashimoto fig. 9).
- Koyanagi modified by Hashimoto disclose a light-transparent cover is arranged opposite to the lens and inside the lens retainer (Hashimoto fig. 10).

With regard to claims 30, 36, 38, in addition to the limitations disclosed in claims 1-2 above, Koyanagi also discloses:

- An optical path defining unit 43 arranged opposite to the solid state image sensor 1 and defining an optical path to the solid state image sensor 1 (fig. 1);
- Koyanagi modified by Hashimoto disclose a wiring board 62 on which wiring 54 is formed (Hashimoto ¶ [0109] and fig. 8).

With regard to claim 32, 37, 48, in addition to the limitations disclosed in claims 1-2 and 30 above, Koyanagi modified by Hashimoto also discloses:

- A solid state image sensor 1 formed by resin-sealing 41;
- The solid state image sensor 1 is electrically connected to the wiring 29 in a state that the surface of the light-transparent cover 51 is exposed (fig. 9).

With regard to claim 33, Koyanagi discloses an external terminal 30 connected to the wiring 29 is formed on the surface of the module component wiring board 10 reverse to the surface to which the image sensor 1 is adhered (fig. 1).

With regard to claims 34-35, Koyanagi disclose the external terminal 30 has a protruding shape (fig. 7), where the external 17 of the module component wiring board is connected to the wiring board 10 (fig. 8).

Response to Arguments

Applicant's arguments with respect to claims 1-16, 30-38, and 48-51 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is 571-272-1709. The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wai-Sing Louie/
Primary Examiner, Art Unit 2814

Wsl
January 30, 2008.